Introduction
Goldenrain tree grows 30 to 40 feet tall with an equal spread, in a broad, somewhat irregular globe-shape. Some trees appear vase-shaped. Although it has a reputation for being weak wooded, it is rarely attacked by pests and grows in a wide range of soils, including high pH soils. Goldenrain tree tolerates dryness and casts little shade because of the open growth habit. It makes a good street or parking lot tree, particularly where overhead or soil space is limited, due to its adaptive abilities. The tree grows moderately and bears large panicles of bright yellow flowers in May (USDA hardness zone 9) to July (USDA hardness zone 6) when few other trees bloom. It is not as showy as Koelreuteria bipinnata but is much more cold-tolerant. The seed pods look like brown Chinese lanterns and are held on the tree well into the fall.

General Information
Scientific name: Koelreuteria paniculata
Pronunciation: kole-roo-TEER-ee-uh pan-ick-yoo-LAY-tuh
Common name(s): Goldenrain tree, varnish-tree
Family: Sapindaceae
USDA hardiness zones: 5B through 9B (Fig. 2)
Origin: not native to North America
Invasive potential: According to the UF/IFAS Assessment of the Status of Non-Native Plants in Florida's Natural Areas (Fox et al. 2005), Koelreuteria paniculata (goldenrain tree) may be used with caution in the central and southern zones of Florida, but should be managed to prevent its escape (counties are listed by zone at: http://plants.ifas.ufl.edu/assessment); and is not considered a problem species and may be used in north Florida.
Uses: shade; sidewalk cutout (tree pit); street without sidewalk; specimen; parking lot island < 100 sq ft; parking lot island 100-200 sq ft; parking lot island > 200 sq ft; tree lawn 3-4 feet wide; tree lawn 4-6 feet wide; tree lawn > 6 ft wide; urban tolerant; highway median; reclamation; container or planter
Availability: not native to North America

Description
Height: 30 to 40 feet
Spread: 30 to 40 feet
Crown uniformity: irregular
Crown shape: round, vase

Figure 1. Middle-aged Koelreuteria paniculata: goldenrain tree
Credits: Ed Gilman, UF/IFAS
Crown density: open
Growth rate: moderate
Texture: coarse

Foliage
Leaf arrangement: alternate (Fig. 3)
Leaf type: even-pinnately compound, odd-pinnately compound
Leaf margin: lobed, incised, serrate
Leaf shape: ovate, oblong
Leaf venation: pinnate
Leaf type and persistence: deciduous
Leaf blade length: less than 2 inches, 2 to 4 inches
Leaf color: green
Fall color: yellow
Fall characteristic: showy

Flower
Flower color: yellow
Flower characteristics: very showy

Fruit
Fruit shape: oval, elongated
Fruit length: 1 to 3 inches
Fruit covering: dry or hard

Fruit color: green, brown
Fruit characteristics: does not attract wildlife; showy; fruit/leaves not a litter problem

Trunk and Branches
Trunk/bark/branches: branches droop; not showy; typically one trunk; thorns
Pruning requirement: needed for strong structure
Breakage: resistant
Current year twig color: brown
Current year twig thickness: thick
Wood specific gravity: unknown

Culture
Light requirement: full sun
Soil tolerances: clay; sand; loam; alkaline; acidic; extended flooding; well-drained
Drought tolerance: high
Aerosol salt tolerance: moderate

Other
Roots: not a problem
Winter interest: no
Outstanding tree: yes
Ozone sensitivity: sensitive
Verticillium wilt susceptibility: susceptible
Pest resistance: resistant to pests/diseases

Use and Management
The root system is coarse with only a few but large roots, so transplant when young or from containers. Do not transplant in the fall as success rate is reportedly limited. Considered a city tolerant tree due to tolerance to air pollution and ability to withstand drought, heat, and alkaline soils. It also tolerates some salt spray but requires well-drained soil. It would be hard to find a more adaptive yellow flowering tree for urban planting. It makes a nice patio tree, creating light shade but its brittle wood can break easily in windy weather.

The tree has only a few branches when it is young and some pruning to increase branchiness helps sell the tree. Prune the tree early to space major branches along the trunk to create a strong branch structure and the tree will be longer-lived and require little maintenance. Dead wood is often present in the canopy and should be removed periodically to maintain a neat appearance. Only single-stemmed trees trained in the nursery with well-spaced branches should be planted along streets and parking lots.
One cultivar is listed; ‘Fastigiata’—upright growth habit.

**Pests**
Occasional attacks by scale may be seen. Sprays of horticultural oil control overwinter stages. Boxelder bug can be a menace.

**Diseases**
*Koelreuteria* is subject to few diseases. A canker causes dead and sunken areas on the bark. Coral pink fruiting bodies develop on the diseased bark. Prune out infected branches and fertilize to maintain tree health.

Verticillium wilt attacks *Koelreuteria*. The disease causes wilting and death of leaves on infected branches. Eventually the entire tree may be killed. Fertilize to stimulate growth. There are no chemical controls.